

Public Information Meeting

Troy 40370

Bridge Replacement

NH 12 over South Branch Ashuelot River

Troy 40371

Bridge Rehabilitation

NH 12 over NHRR (Cheshire Rail Trail)

June 23, 2022

Key Project Team Members

Jason Tremblay, Project Manager (NHDOT)

Ron Kleiner, Project Lead (NHDOT)

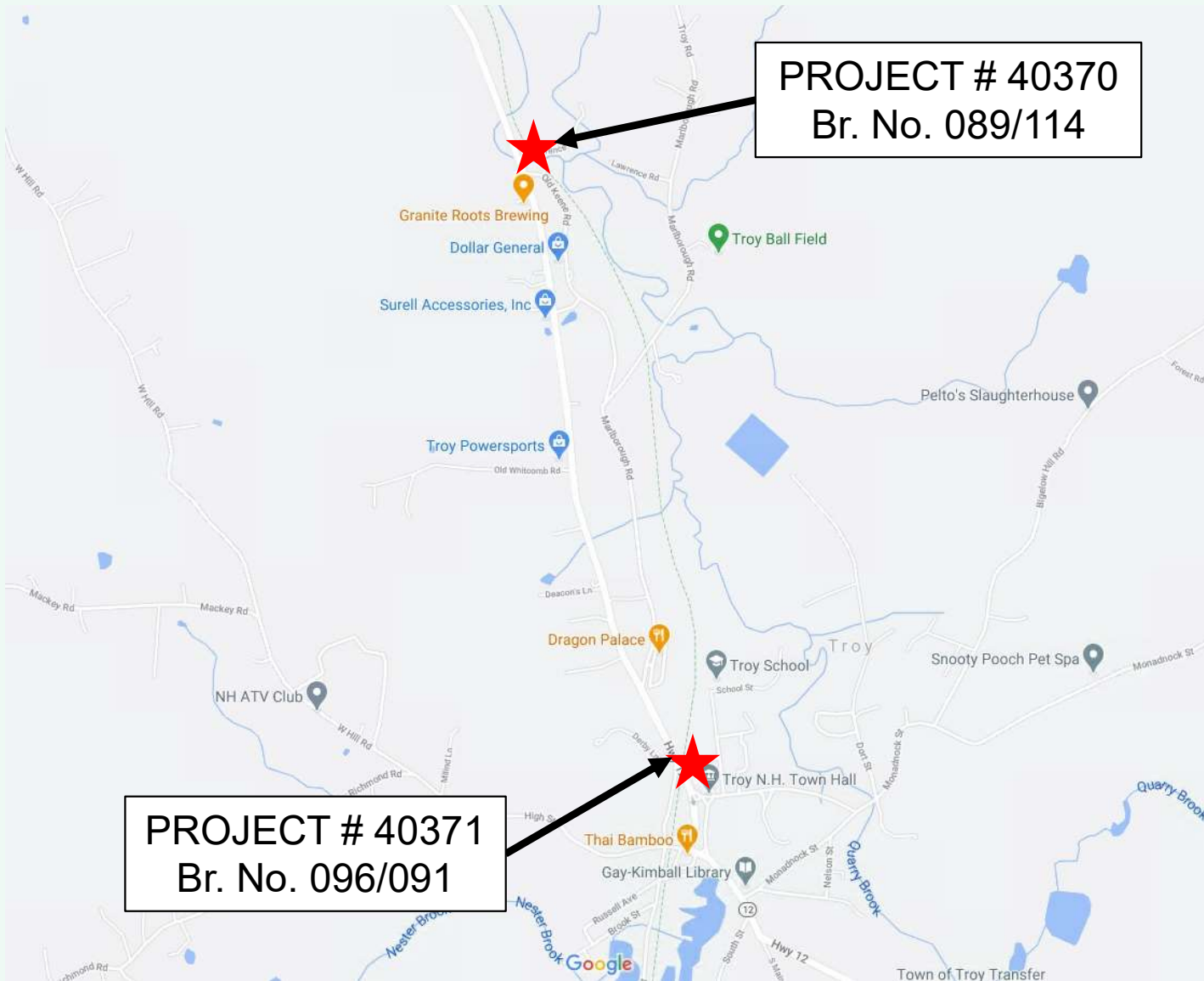
Rebecca Martin, Senior Environmental Manager (NHDOT)

Jennifer Reczek, Bridge Consultant Design Chief (NHDOT)

Thom Marshall, Jacobs Project Manager / Bridge Lead

Clint Mercer, Jacobs Highway Lead

Project Locations



Agenda

- Troy 40370
 1. Existing Information
 2. Alternatives Considered & Selected Alternative
 3. Traffic Control
 4. Environmental & Cultural Resources Coordination Update
- Troy 40371
 1. Existing Information
 2. Alternatives Considered & Selected Alternative
 3. Traffic Control
 4. Environmental & Cultural Resources Coordination Update
- Next Steps for both projects

Purpose and Need

Purpose:

To provide structurally sound, environmentally permittable bridges while minimizing the permanent and temporary impacts to surrounding natural and cultural resources and overall project cost.

Purpose and Need

Troy 40370 Need:


Advanced deterioration of the deck warrants the replacement of the bridge and the substandard bridge railing. The proposed longer span will improve the hydraulic performance of the river.

Troy 40371 Need:

Deterioration of the deck and steel beams requires the replacement of the beams and bridge deck. The substandard bridge rail will also be replaced.

Project Background

- Last Public Meeting – October 2020
- Type, Span & Location Report Submission – February 2021
- Selected Alternatives Approved – May 2021
- Natural Resources Meeting – June 2021
- Cultural Resources Meeting – October 2021
- Right-Of-Way research & updates – Spring 2022
- Preliminary Plans Submission – April 2022

A photograph of a concrete bridge over a river. The bridge has a large, arched opening. The river flows through the arch, with white water rapids and rocks visible. The surrounding area is wooded with bare trees. A small bridge is visible in the distance through the arch. The text "Troy 40370" is overlaid in green, and "NH 12 over South Branch Ashuelot River" is overlaid in black.

Troy 40370

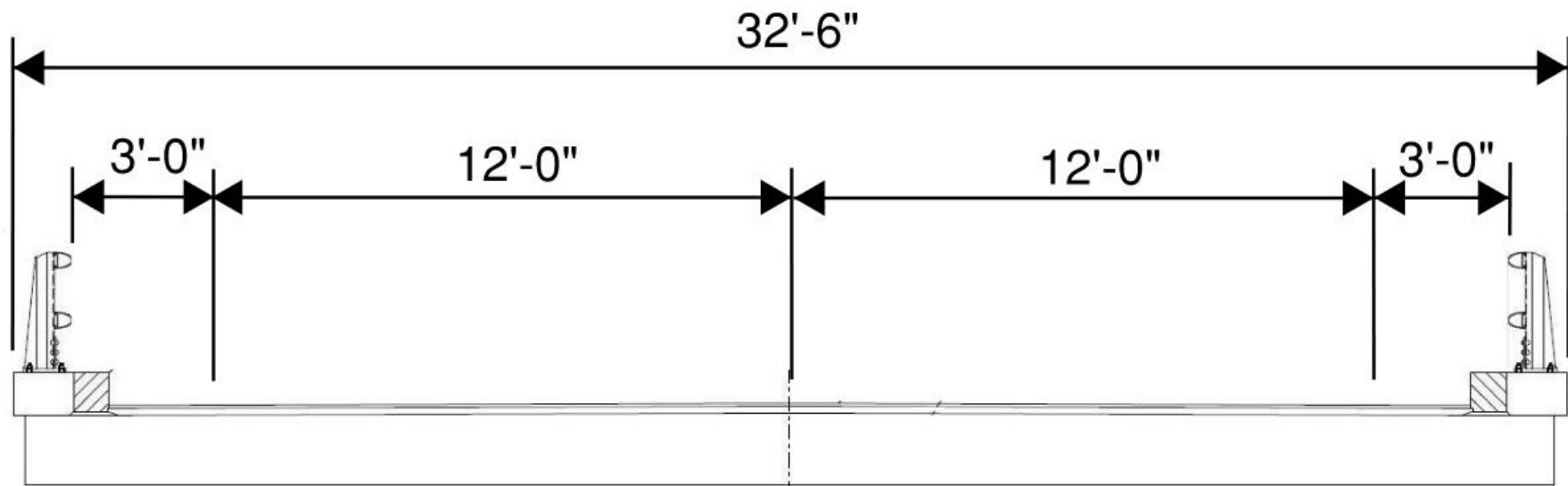
NH 12 over South Branch
Ashuelot River

40370 Project Location



40370 Existing Bridge Details

- Concrete rigid frame
- 32'-0" single span
- 30'-0" rail-to-rail, 32'-6" overall
- Constructed in 1941
 - Curbs and rails replaced in 1977



Deck Section

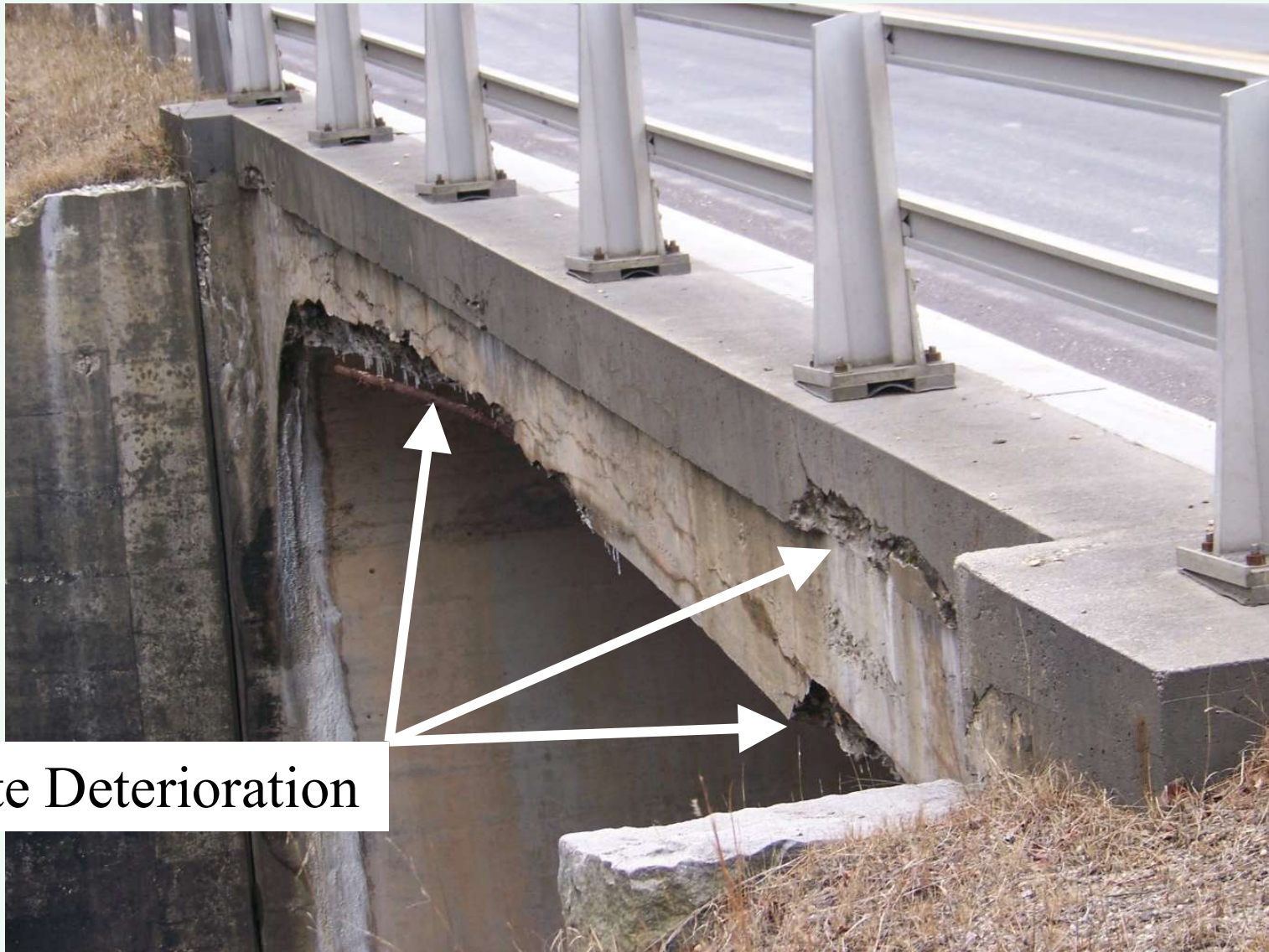
40370 Roadway Information



Narrow shoulders

- 9,500 vehicles per day, 6% trucks
- Nearby intersections with Old Keene Road and Lawrence Road

40370 Bridge Deterioration



Concrete Deterioration

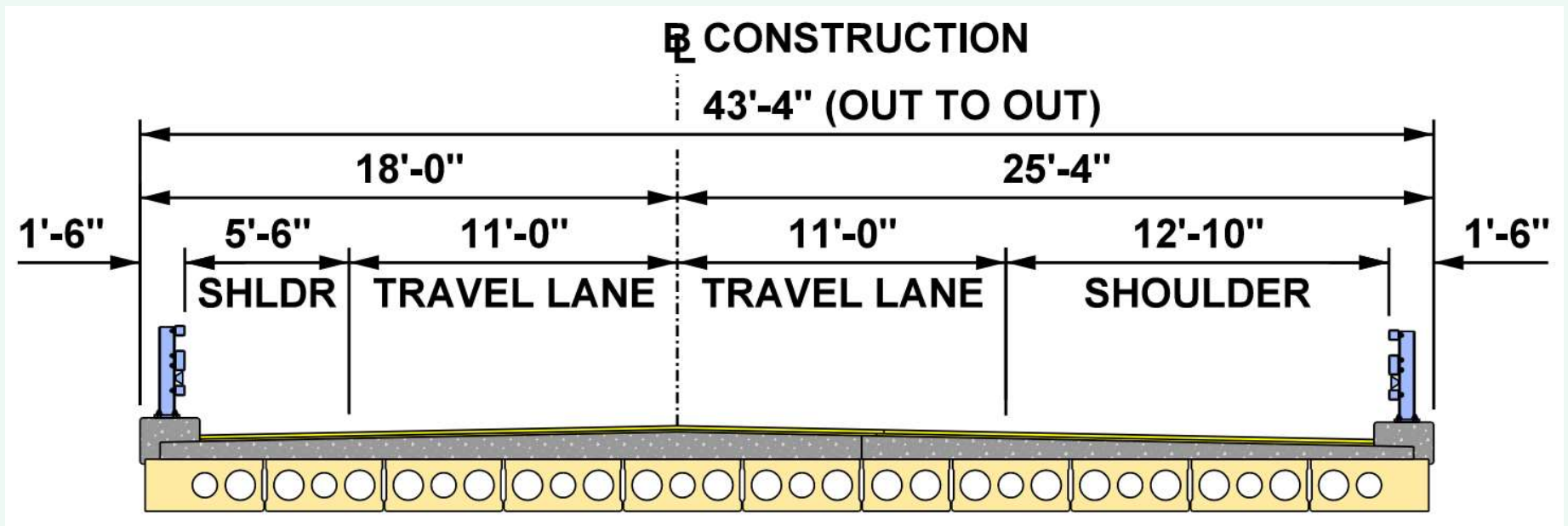
40370 Alternatives Considered

- Rehabilitation/Superstructure replacement
- Bridge replacement with:
 - NEXT beams
 - Precast Bridge Units (PBU)
 - **Voided deck slabs - selected**



40370 Replacement Details

- Span lengthened to 52'-0"
- Shoulders widened to 5'-6" (minimum)
- Extra widening for temporary traffic control



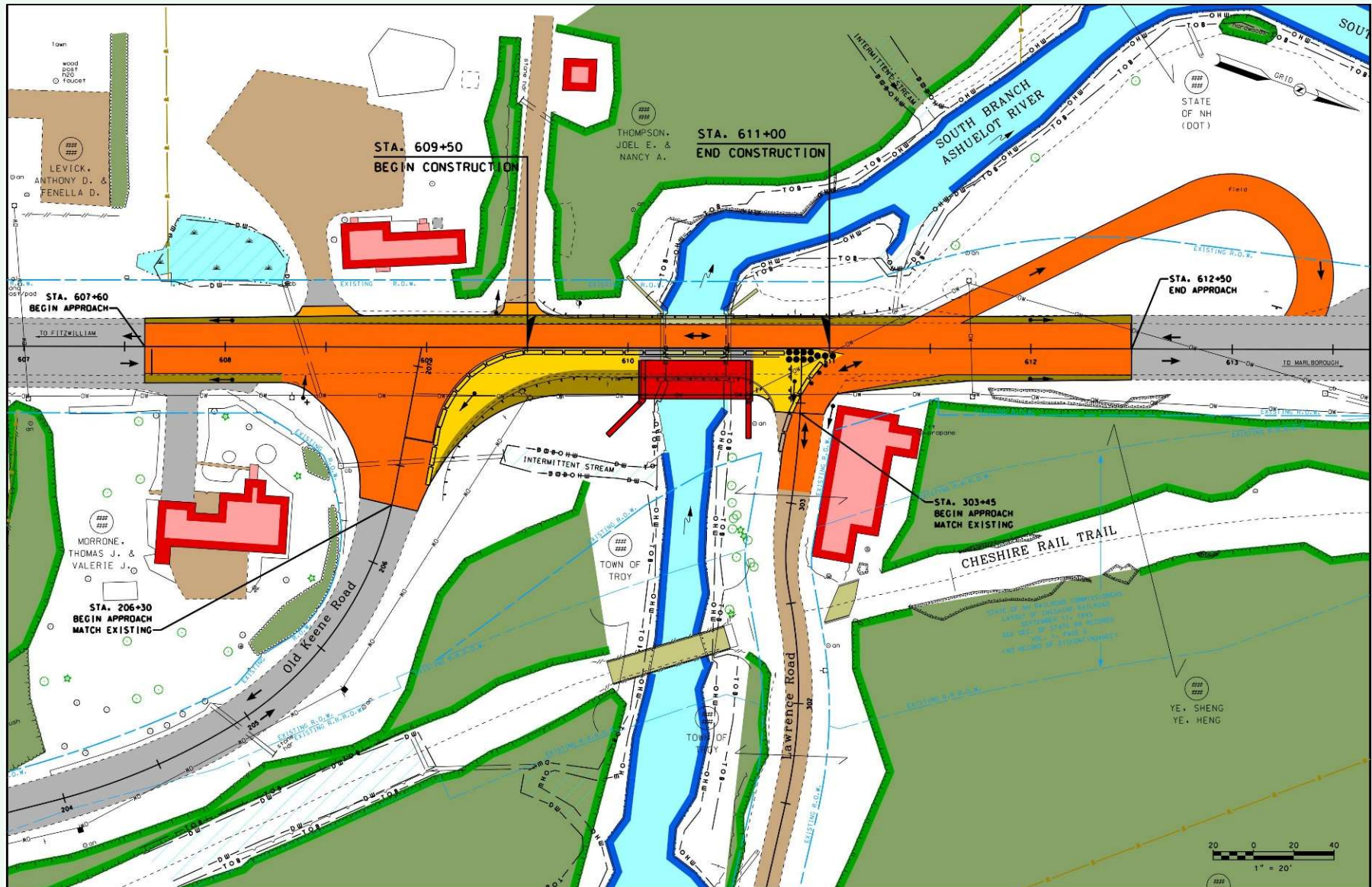
Deck Section

40370 Traffic Control Alternatives

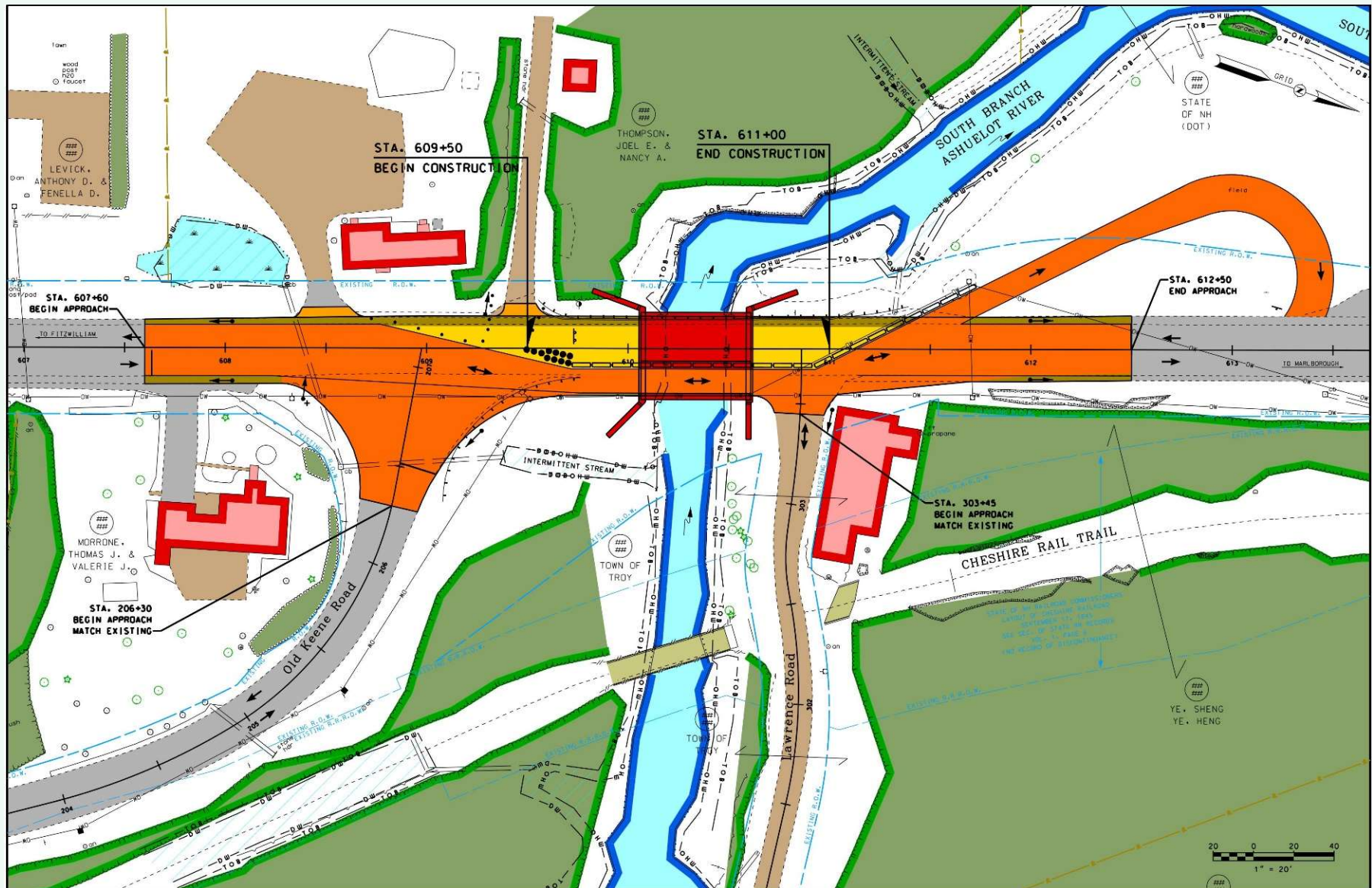
One-lane alternating two-way traffic using:

- Temp bridge located:
 - *East of existing bridge* – Significant temporary roadway fill and tight fit for trucks.
 - *Adjacent to rail trail* – Greater impacts and sharp temp roadway curvature limits trucks and traffic flow.
 - *West of existing bridge* – Limited by river, significant temporary roadway fill, impacts to private driveways, and most costly.
- **Phased construction using a widened east shoulder – preferred**

40370 Traffic Control – Phase 1



40370 Traffic Control – Phase 2



40370 Natural & Cultural Resources

- South Branch Ashuelot River
 - Wetland Permit and Comprehensive Shoreland Protection Permit required for impacts
 - Riprap scour protection
 - Stormwater treatment
- Potential threatened species
 - Northern Long-eared Bat
- Reviewing historic resources in accordance with Section 106
 - Bridge not eligible for National Register of Historic Places due to loss of integrity
 - Forristall Historic District - No adverse impacts anticipated

Troy 40370 Questions

Before moving to the next section,
please ask any questions you may
have regarding the proposed work



Troy 40371

NH 12 over

NHRR (Cheshire Rail Trail)

40371 Project Location



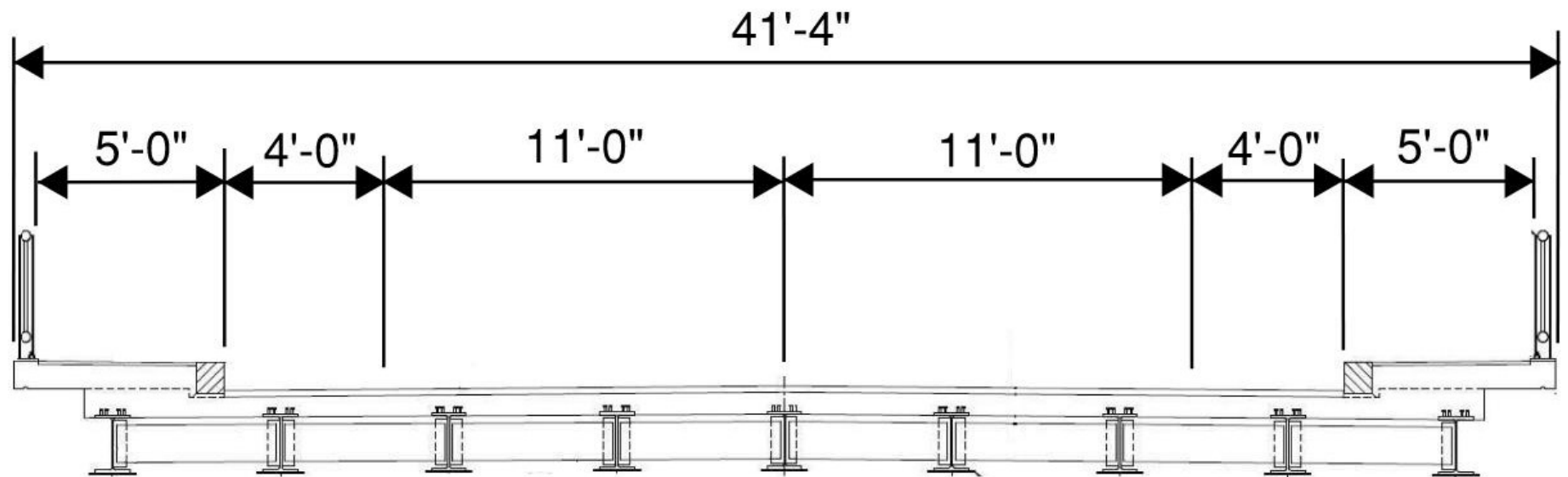
40371 Existing Bridge Details

- Steel beams with concrete deck
- Two spans totaling 62'-6" (38'-6" and 24'-0")
- 55-degree skew
- Constructed in 1957
 - Beams and rails repainted in 1983
 - Concrete repair in 1997 and 1998
- 9,500 vehicles per day, 6% trucks



40371 Existing Section

- 30'-0" curb-to-curb width
- 5'-0" sidewalk each side

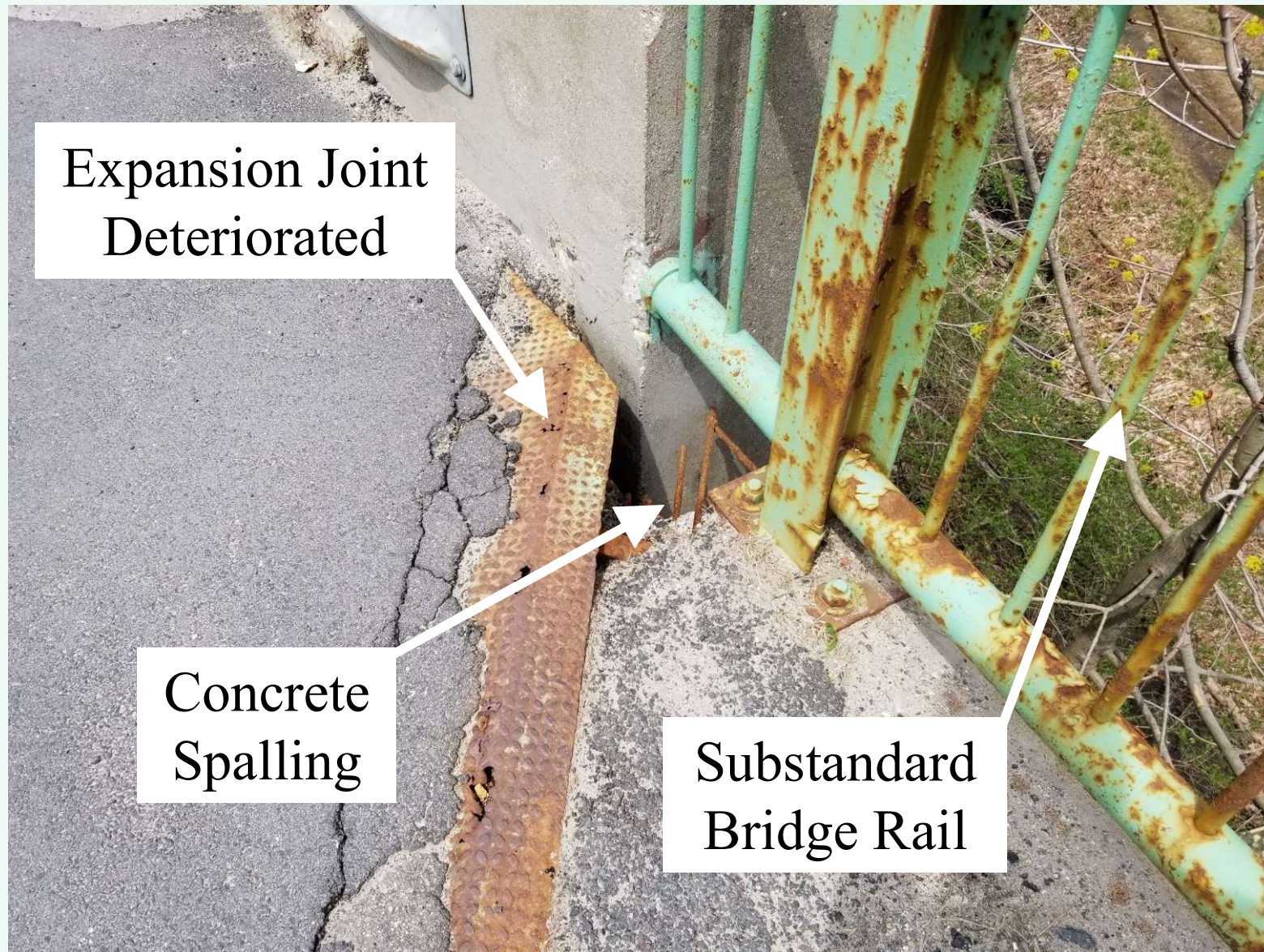


Deck Section

40371 Existing Bridge Details



40371 Existing Deterioration



40371 Existing Deterioration



Concrete Deck
Cracking and
Spalling

Concrete Wing
Spalling

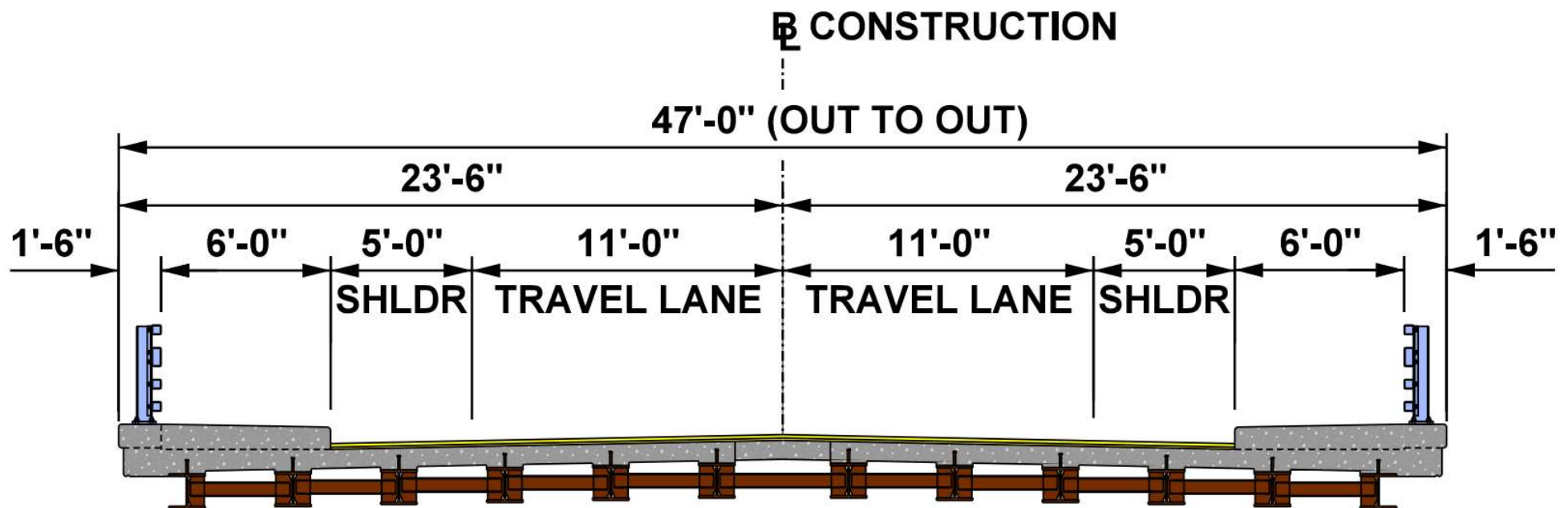


40371 Alternatives Considered

- Deck replacement
- Complete replacement with a single span:
 - 94-ft span new abutments behind existing abutments
 - 64-ft span placing new north abutment near existing pier
- **Superstructure replacement - selected**

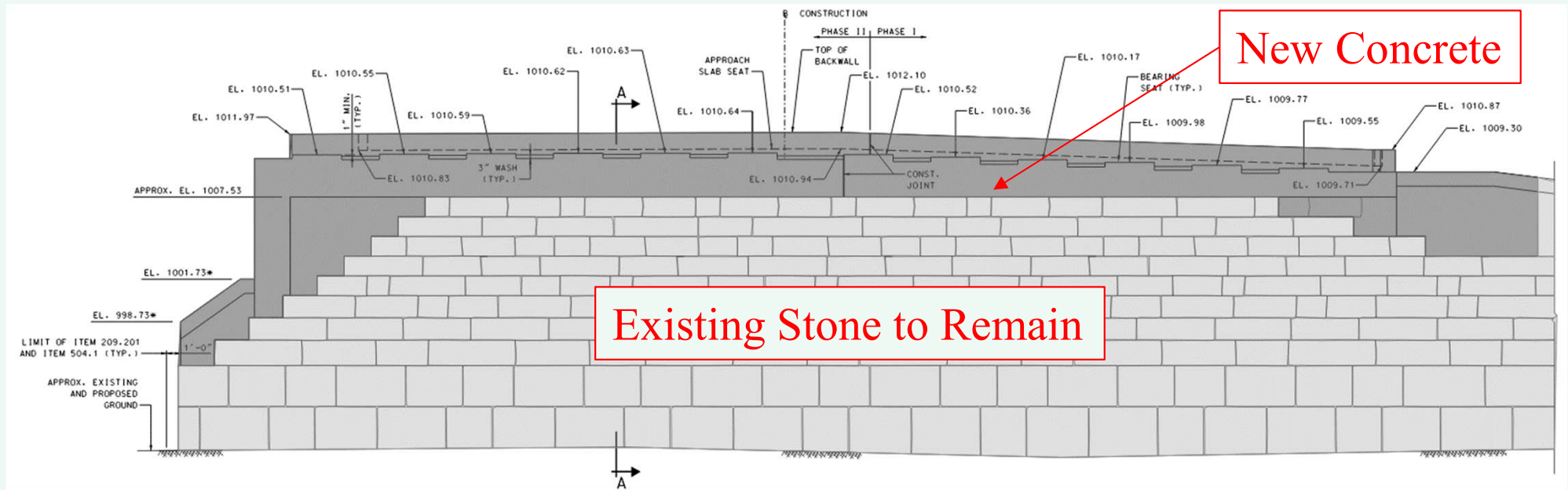
40371 Superstructure Replacement Details

- No change to span configuration
- Wider Sidewalks / Wider shoulders (bicycles)
- Updated bridge railing



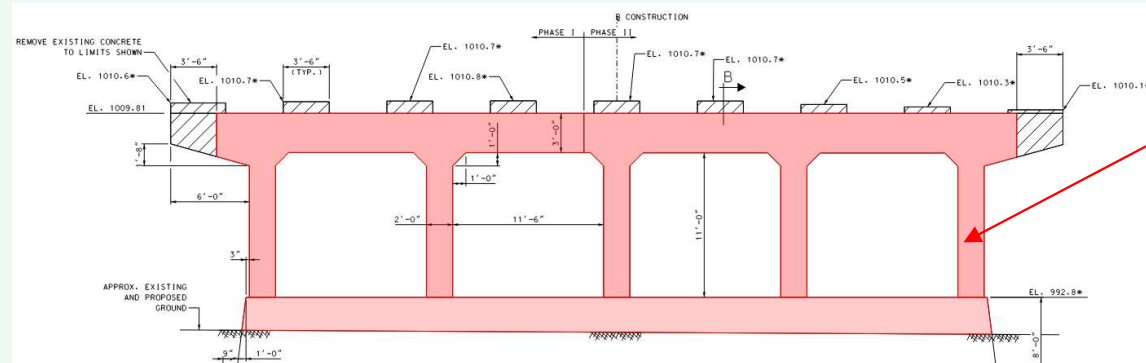
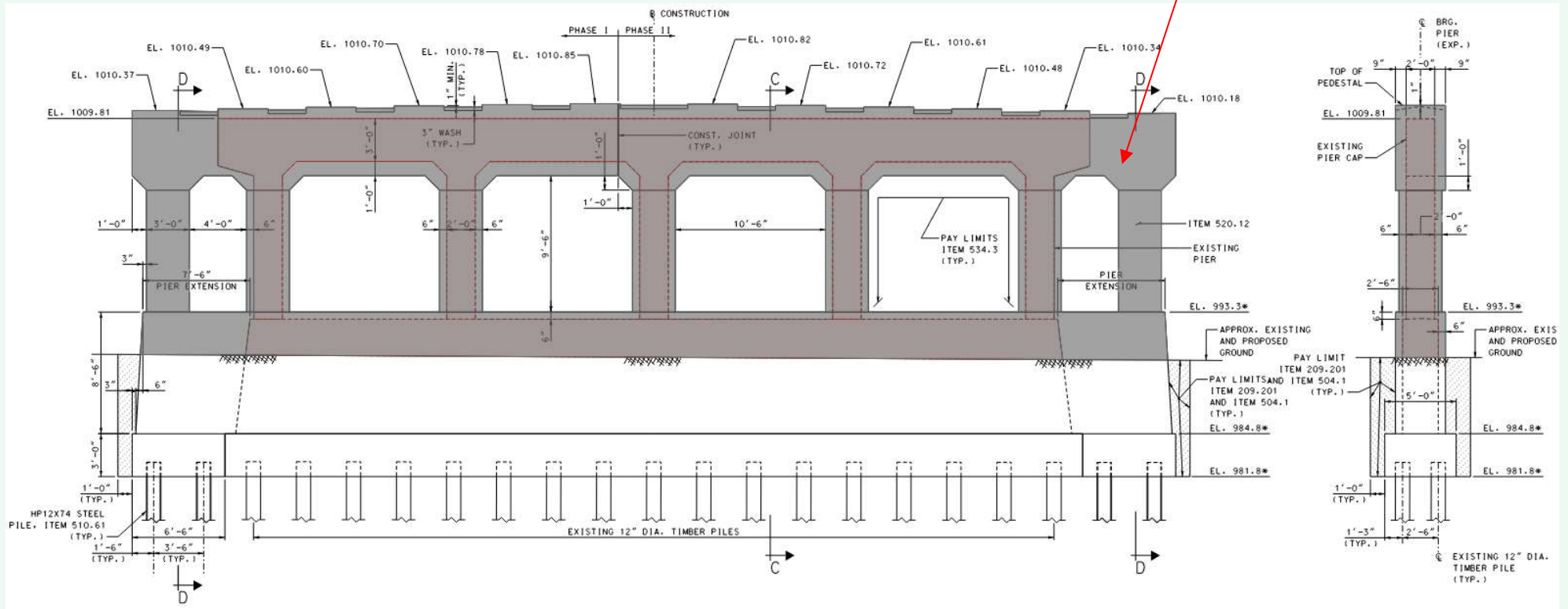
Deck Section

40371 Proposed Abutment Rehabilitation



40371 Proposed Pier Rehabilitation

New Concrete

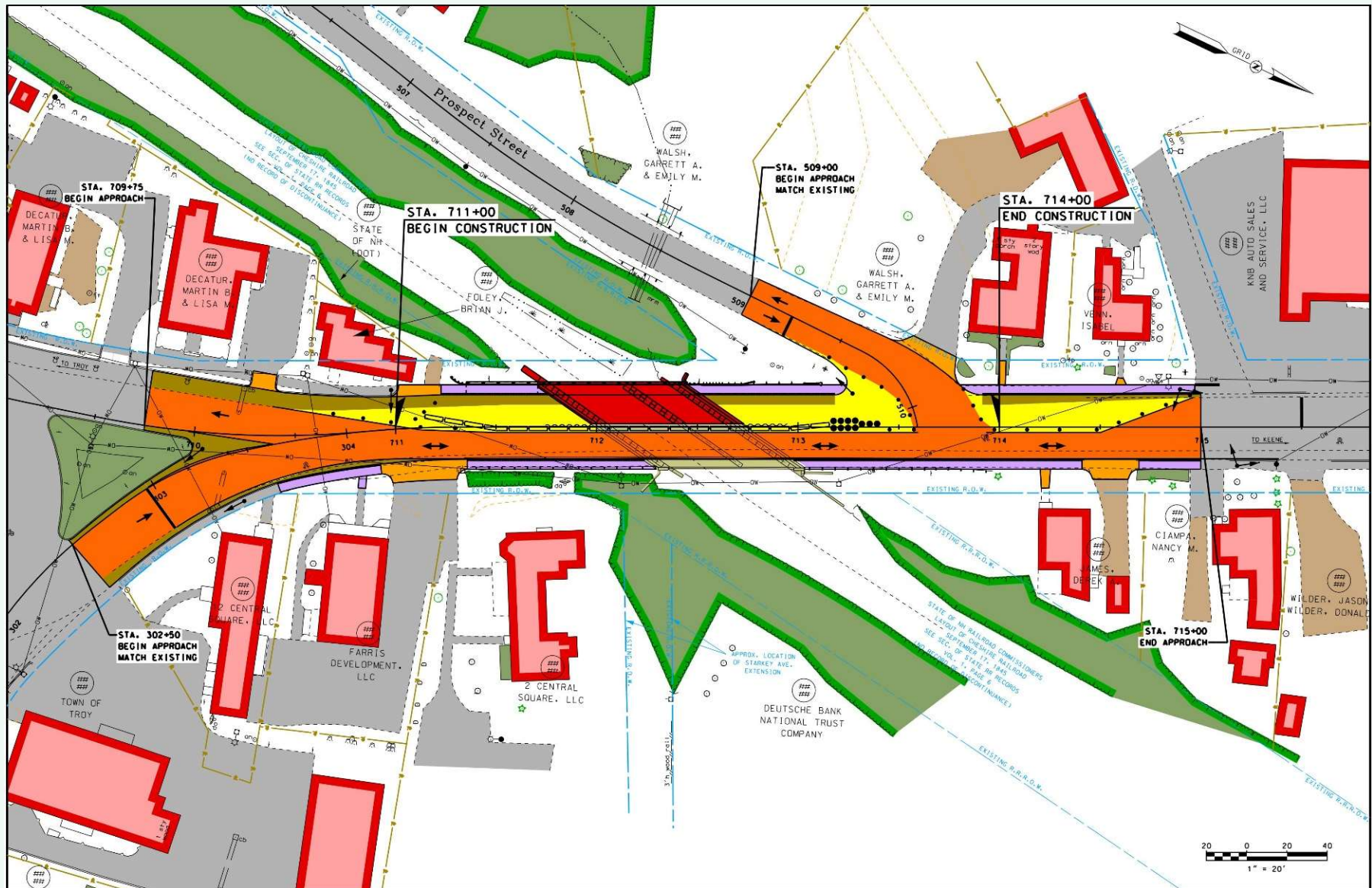


Existing Concrete to Remain

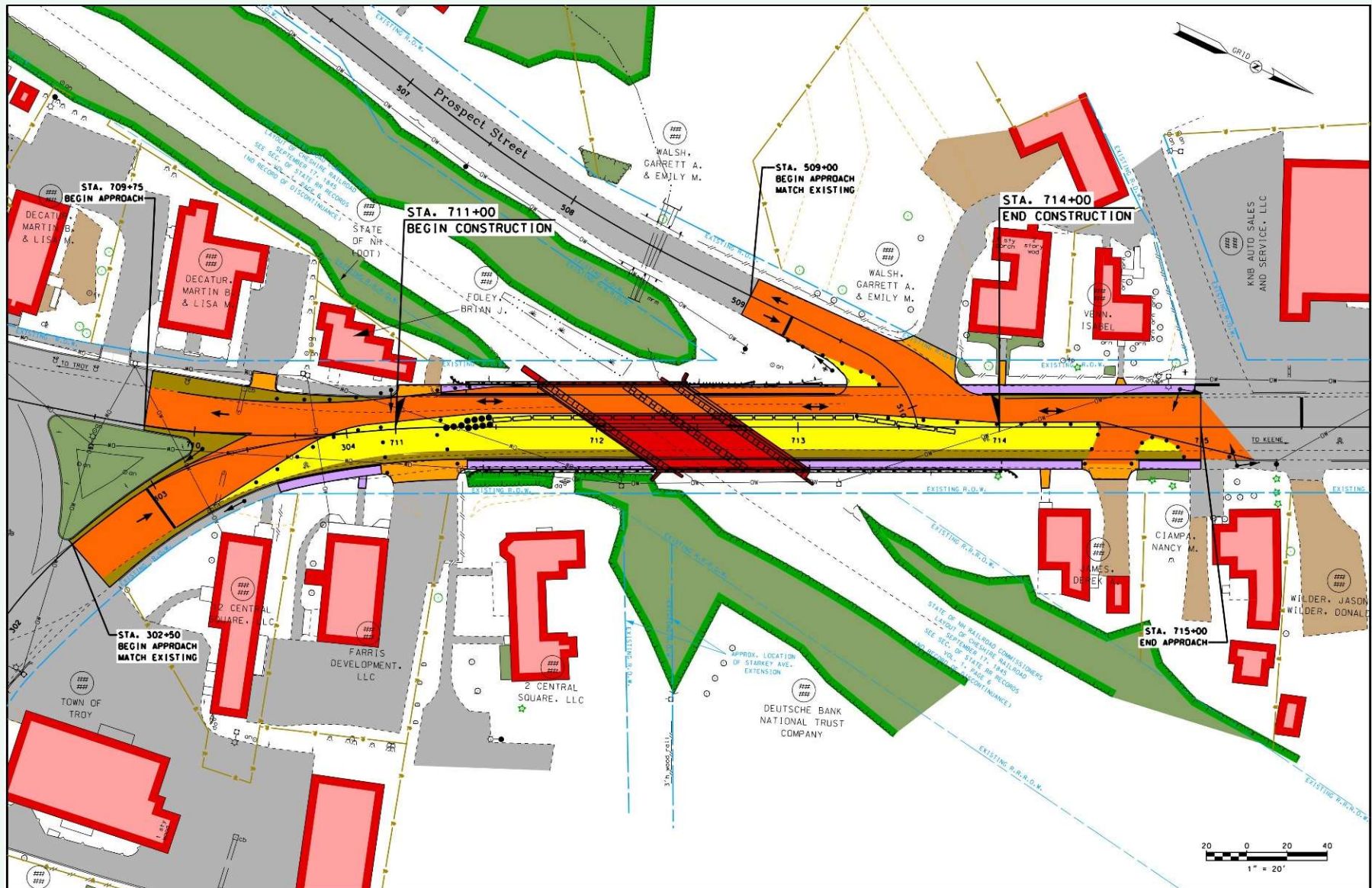
40371 Traffic Control Alternatives

- *Phased construction with NB traffic on NH 12 and SB traffic detouring on local roads – upgrades needed for local roads and slightly increased emergency response times.*
- *NB traffic diverted across temporary bridge and SB traffic detouring on local roads – upgrades needed for local roads, additional impacts to rail trail and abutters, and slightly increased emergency response times*
- ***Phased construction with one-lane alternating two-way traffic – preferred***

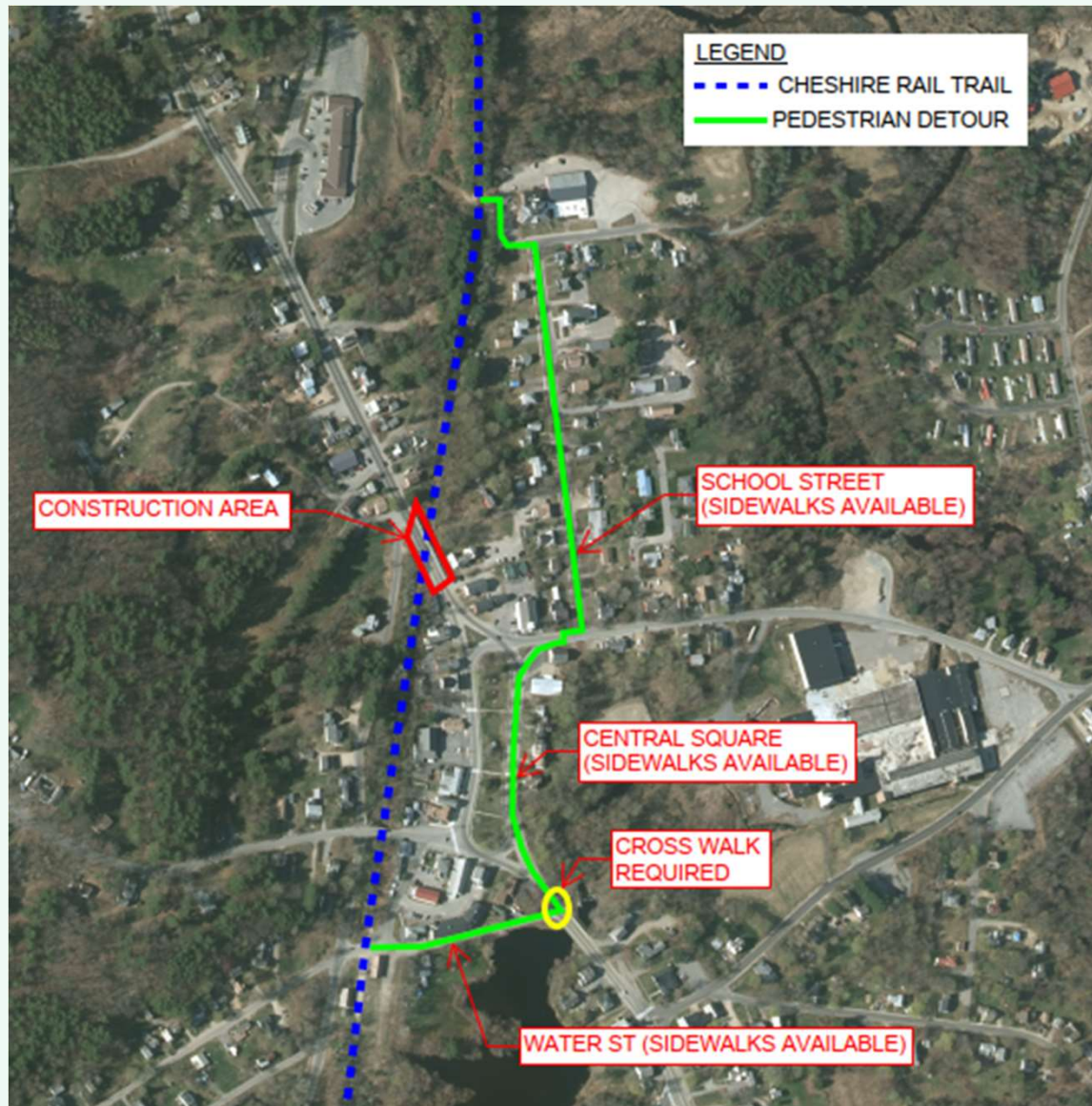
40371 Traffic Control – Phase 1



40371 Traffic Control – Phase 2



40371 Rail Trail Detour



40371 Natural & Cultural Resources

- Wetland Permit may be required for wetland adjacent to rail trail
- Potential threatened species
 - Northern long-eared bat
- Reviewing historic resources in accordance with Section 106
 - Bridge is contributing resource within Troy Village Historic District
 - Cheshire Rail Trail potentially eligible for the National Register of Historic Places
 - Nearby historic homes - contributing resources

40371 Natural & Cultural Resources

- Bridge railing sympathetic to historic district
 - Crash-tested to current standards
 - Top rail and vertical pickets emulate existing rail

Existing



Proposed

Troy 40371 Questions

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have regarding the proposed work

Recap and Next Steps

Troy 40370 Preferred Alternative

- Bridge replacement with voided deck slabs
- One-lane alternating two-way traffic using a widened east shoulder
 - Construction cost: \$3,950,000

Troy 40371 Preferred Alternative

- Superstructure replacement with steel beams
- One-lane alternating two-way traffic
 - Construction cost: \$3,780,000

Project Schedules

- Conduct Public Hearing – Fall 2022
- Complete the NEPA process (National Environmental Policy Act) – 2022
- Final Design – 2023
 - Sidewalk and Work Zone Agreements
- Advertising for Bid – Summer 2024
- Construction – Begins 2024

Contact Information:

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